

**IN THE CLAIMS**

Please amend the claims as follows:

1. (Currently Amended) A golf ball comprising a core and a cover, wherein ~~at least one of the core and the cover~~ is cast from a castable reactive acrylate functional composition comprising:

at least one acrylate functional component; and  
at least one free radical initiator.

2. (Original) The golf ball of claim 1, wherein the at least one acrylate functional component is selected from the group consisting of monofunctional, difunctional, trifunctional, tetrafunctional, and pentafunctional monomers and oligomers, and combinations thereof.

3. (Original) The golf ball of claim 1, wherein the at least one acrylate functional component comprises about 1 percent to about 100 percent urethane acrylate, urea acrylate, or a combination thereof.

4. (Withdrawn) The golf ball of claim 1, wherein the at least one acrylate functional component is selected from the group consisting of water dispersible monomers, adhesion promoting monomers, pigment dispersing monomers, fire retarding monomers, metallic diacrylate, metallic dimethacrylate, epoxy acrylates, epoxy methacrylates, acrylate half esters, methacrylate half esters, polybutadiene acrylates, and combinations thereof.

5. (Original) The golf ball of claim 1, wherein the at least one acrylate functional component has a viscosity of about 100 cP or greater.

6. (Original) The golf ball of claim 1, wherein the at least one free radical initiator

comprises at least one peroxide.

7. (Original) The golf ball of claim 1, wherein the at least one free radical initiator comprises at least one azo compound.
8. (Original) The golf ball of claim 6, wherein the at least one free radical initiator is selected from the group consisting of di-t-amyl peroxide, tert-amyl peroxy-2-ethylhexyl carbonate, t-amyl peroxyacetate, ethyl 3,3-D (t-amylperoxy) butyrate, 2,2-di-(t-amylperoxy) propane, t-amyl perbenzoate, di(2-t-butyl-peroxyisopropyl)benzene peroxide, 1,1-bis(t-butylperoxy)-3,3,5-trimethylcyclohexane, dicumyl peroxide, di-t-butyl peroxide, 2,5-di-(t-butylperoxy)-2,5-dimethyl hexane, n-butyl-4,4-bis(t-butylperoxy)valerate, lauryl peroxide, benzoyl peroxide, t-butyl hydroperoxide, and mixtures thereof.
9. (Original) The golf ball of claim 1, further comprising an intermediate layer.
10. (Original) The golf ball of claim 9, wherein the intermediate layer comprises an ionomer material.
11. (Original) The golf ball of claim 1, wherein the golf ball further comprises at least one top coat disposed about the cover.
12. (Original) The golf ball of claim 11, wherein the cover has a thickness of about 50  $\mu\text{m}$  or greater.
13. (Original) The golf ball of claim 12, wherein the cover has a thickness of about 0.2 inches to about 0.035 inches.

14. – 31. (Canceled)

32. (Currently Amended) A golf ball comprising at least one structural cover layer formed from an acrylate functional composition comprising:

a polyurethane backbone formed from the reaction of at least one isocyanate and at least one polyol;

at least one unsaturated acrylate functional segment reacted with the polyurethane backbone; and

at least one free radical initiator.

33. (Previously Presented) The golf ball of claim 32, wherein the at least one unsaturated acrylate functional segment comprises hydroxy-terminated acrylates, amine-terminated acrylates, or mixtures thereof.

34. (Currently Amended) The golf ball composition of claim 33, wherein the at least one acrylate functional segment comprises hydroxy-terminated acrylate, hydroxy-terminated methacrylate, hydroxy-terminated methyl methacrylate, hydroxy-terminated ethyl acrylate, hydroxy-terminated ethyl methacrylate, hydroxy-terminated butyl acrylate, hydroxy-terminated butyl methacrylate, hydroxy-terminated glycidyl acrylate, hydroxy-terminated glycidal methacrylate, or mixtures thereof.

35. (Currently Amended) The golf ball composition of claim 32, wherein the at least one free radical initiator comprises at least one peroxide.

36. (Currently Amended) The golf ball composition of claim 35, wherein the at least one free radical initiator comprises di-t-amyl peroxide, di(2-t-butyl-peroxyisopropyl)benzene peroxide, 1,1-bis(t-butylperoxy)-3,3,5-trimethylcyclohexane, dicumyl peroxide, di-t-butyl peroxide, 2,5-di-(t-butylperoxy)-2,5-dimethyl hexane, n-butyl-4,4-bis(t-butylperoxy)valerate, lauryl peroxide, benzoyl peroxide, t-butyl hydroperoxide, or mixtures thereof.

37. (Currently Amended) The golf ball composition of claim 35, wherein the at least one

free radical initiator is selected from the group consisting of di-t-amyl peroxide, tert-amyl peroxy-2-ethylhexyl carbonate, t-amyl peroxyacetate, ethyl 3,3-D (t-amylperoxy) butyrate, 2,2-di-(t-amylperoxy) propane, t-amyl perbenzoate, and mixtures thereof.

38. (Canceled)

39. (Currently Amended) The golf ball composition of claim 32, wherein the composition comprises about 1 to about 100 percent of polyurethane backbone urethane acrylate and about 99 percent to 0 percent of at least one unsaturated acrylate functional segment resin.

40. (Currently Amended) The golf ball composition of claim 39, wherein the at least one unsaturated acrylate functional segment resin comprises epoxy acrylates, epoxy methacrylates, acrylate half esters, methacrylate half esters, polybutadiene acrylates, urea acrylates, and combinations thereof.

41. (Currently Amended) A golf ball comprising a core, an inner cover, and an outer cover, wherein at least one structural layer of the inner cover or outer cover is formed from an acrylate functional composition comprising:

a polyurea polyurethane backbone formed from the reaction of at least one isocyanate[[],] and at least one amine-terminated hydroxy-terminated compound;

at least one unsaturated acrylate functional segment reacted with the polyureas polyurethane backbone; and

at least one free radical initiator.

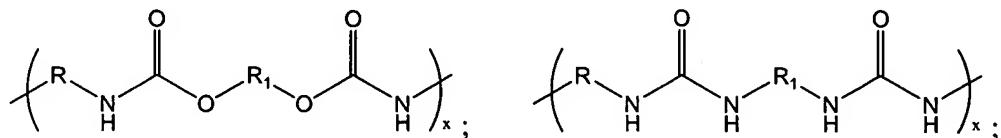
42. (Currently Amended) The golf ball composition of claim 41, wherein the at least one unsaturated acrylate functional segment comprises acrylate, methacrylate, methyl methacrylate, ethyl acrylate, ethyl methacrylate, butyl acrylate, butyl methacrylate, glycidyl acrylate, glycidal methacrylate, or mixtures thereof.

43. (Currently Amended) The golf ball composition of claim 41, wherein the at least one unsaturated acrylate functional segment comprises hydroxy-terminated acrylates, amine-terminated acrylates, or mixtures thereof amine-terminated compound is selected from the

~~group consisting of amine terminated hydrocarbons, amine terminated polyethers, amine-terminated polyesters, amine terminated polyacrylates, amine terminated polycarbonates, amine terminated polyamides, and mixtures thereof.~~

44. (Canceled)

45. (Currently Amended) The golf ball composition of claim 41, wherein the polyureas polyurethane backbone comprises linkages having the general formulae:



or a mixture thereof, wherein x is the chain length, *i.e.*, about 1 or greater, and wherein R and R<sub>1</sub> are straight chain or branched hydrocarbon chains having about 1 to about 20 carbons, and wherein the linkages form greater than about 10 percent of the polyurea backbone.

46. (Canceled)

47. (Currently Amended) The golf ball composition of claim 41, wherein the acrylate functional composition is present in the at least one structural layer comprises a outer cover layer.

48. (Currently Amended) The golf ball composition of claim 41, wherein the at least one free radical initiator is selected from the group consisting of di-t-amyl peroxide, tert-amyl peroxy-2-ethylhexyl carbonate, t-amyl peroxyacetate, ethyl 3,3-D (t-amylperoxy) butyrate, 2,2-di-(t-amylperoxy) propane, t-amyl perbenzoate, and mixtures thereof.

49. (Currently Amended) The golf ball composition of claim 41, wherein the composition comprises about 1 to about 100 percent of urea-acrylate polyurethane backbone and about 99 percent to 0 percent of at least one unsaturated acrylate functional segment resin.